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AMSAT NEWS SERVICE
ANS-057

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The AMSAT News Service bulletins are a free, weekly news and information service of AMSAT, The Radio Amateur Satellite Corporation. ANS publishes news related to Amateur Radio in Space including reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

The news feed on http://www.amsat.org publishes news of Amateur Radio in Space as soon as our volunteers can post it.

Please send any amateur satellite news or reports to: ans-editor [at] amsat.org

You can sign up for free e-mail delivery of the AMSAT News Service Bulletins via the ANS List; to join this list see: https://mailman.amsat.org/postorius/lists/ans.amsat.org/

ANS-057 AMSAT News Service Weekly Bulletins

To: All RADIO AMATEURS
From: Radio Amateur Satellite Corporation
712 H Street NE, Suite 1653
Washington, DC 20002

DATE 2023 Feb 26

Space Station Contact With Students In Malta

An ARISS contact between students at Stella Maris College, Gzira, Malta, callsign 9H1MRL and the International Space Station (ISS) took place successfully at 12:34 GMT on Wednesday, February 15. It was the first ever ARISS contact from the European island nation of Malta.

The ISS crew member, astronaut Josh Cassada, KI5CRH, used the ISS callsign OR4ISS on the downlink frequency of 145.800 MHz. The ARISS team Malta made use of the callsign 9H1MRL, the club call of the Malta Amateur Radio League (MARL).

The signal was receivable in the British Isles and across Europe. The contact was conducted by five local radio amateurs; Dominic Azzopardi, 9H1M, Manuel Grech, 9H1GW, Andrew Vella, 9H2AV, Trevor Sammut, 9H5TS and

Anthony Scicluna, 9H2AS. The station was set up in the school’s auditorium with a 10 element crossed Yagi and rotator on the roof.

Stella Maris College is part of a network (La Salle Malta) of Lasallian Colleges that include De La Salle College and the Mellieha Retreat Centre. The schools take their inspiration from their founder, John Baptist de la Salle. In the Christian faith, John De La Salle is venerated as the Patron Saint of Teachers. La Salle Malta was founded as a single school in 1903 by the Brothers of the Christian Schools and is now the La Salle Malta’s Lasallian Colleges, run by the Malta Trust of the Brothers of the Christian Schools.

Stella Maris College hosted this ARISS contact for participating students in grades 5 through 10 (ages 9-15 years). Stella Maris College has partnered with members of the Malta Amateur Radio League (MARL) (9H1MRL) who provided support during the ARISS contact. Members of MARL have also made presentations to students about amateur radio, and demonstrated satellite tracking and talking to other hams through amateur radio satellites.

As a member of MARL, Stella Maris College has previously operated their own amateur radio station. Members of other organizations that are also part of educational activities surrounding this ARISS contact include; the University of Malta, the Malta College for Science and Technology, Malta Council for Science and Technology and Malta College for Arts, Science and Technology.

Basically, a Lasallian School has the following characteristics:
A) respect for each student as a unique person.
B) A strong spirit of Community.
C) A school of Quality.
D) A school that embraces everyone.
E) Shows special preference for persons who are considered poor financially, morally, physically, psychologically.

Mission statement:
Our school is a place where everyone strives to create and nurture a holistic, inclusive and well-ordered learning climate thereby ensuring a high-quality, values-based academic preparation.

The school has an astronomical observatory and electronics forms part of the school curriculum.

The whole event was streamed live, and archived on YouTube at the following URL: https://www.youtube.com/watch?v=fk-Onkbr6PY&t=15s

[ANS thanks ARISS and AMSAT-UK for the above information]

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to design and build the RF communications subsystems for a series of low earth orbit, 1U-3U CubeSats to support AMSAT's educational and engineering objectives.

You should have a working knowledge of analog and digital communications protocols (e.g., FM, PSK, FSK) to provide digitally synthesized audio for FM modulated VHF/UHF/SHF voice and telemetry channels. Development opportunities can begin with modification of previous FOX designs and/or by starting with a blank sheet for an original design.

+ Mechanical Engineers
AMSAT is looking for Mechanical Engineers to join its FOX and GOLF CubeSat teams. You'll collaborate with an all-volunteer team of up to 12 electrical, mechanical, software and systems engineers. You will have the opportunity to use your structural design and analysis skills in the development of a series of low earth orbit and highly elliptical orbit, 1U-3U CubeSats to support AMSAT's educational and engineering objectives.

Your contribution may include a) the development of the spaceframe and deployable solar panel subsystem, b) the analysis of the thermal characteristics of the CubeSat and the design of the thermal management system, c) preparation and oversight of the environmental testing procedure, and/or d) management of documentation of the CubeSats adherence to the launch provider's and space vehicle owner's specifications.

Our volunteers typically spend five hours per week on their project and attend a weekly online update meeting. An Amateur Radio license and CubeSat experience is helpful but not necessary. U.S. citizenship or proof of permanent residency is required.

Interested persons should send an email with their resume/curriculum vitae to: volunteer(a)amsat.org.

[ANS thanks Jonathan Brandenburg, KF5IDY, AMSAT Assistant VP, Engineering for the above information.]

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Buzz Aldrin opened the museum in June, 2012, so the NASA connection will resonate through the event at which many hundreds of visitors are expected to attend daily.

[ANS thanks Dan Sutton, VK6NAD, for the above information]

Crew-6 Launch Slips

NASA has delayed the launch of a commercial crew mission to the International Space Station by a day to give SpaceX additional time to complete work on the vehicle. The crew will include three licensed amateur radio operators for a six-month stay on the ISS.

At a briefing after a flight readiness review for the Crew-6 mission Feb. 21, NASA announced it has rescheduled the launch of the Crew Dragon spacecraft to Feb. 27 at 1:45 a.m. Eastern. The Falcon 9 launch of the spacecraft had been planned for Feb. 26.

The Crew-6 launch will carry two NASA astronauts, Mission Commander Stephen Bowen, KI5BKB, and Pilot Warren "Woody" Hoburg, KB3HTZ, along with UAE (United Arab Emirates) astronaut Sultan Al Neyadi, KI5VTV, and Roscosmos cosmonaut Andrey Fedyaev, who will serve as mission specialists to the space station for a science expedition mission.

If the launch slips again, there is another launch opportunity Feb. 28 at 1:22 a.m. Eastern, followed by three opportunities March 2 through 4.

[ANS thanks SpaceNews for the above information]

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A scheduled ARISS contact is a voice-only communication via Amateur Radio between the International Space Station (ISS) crew and classrooms and communities. These scheduled contact opportunities are offered to formal and informal education institutions and organizations, individually or working together.

Proposals from schools and organizations in the U.S. are accepted during two proposal windows each year – one in the fall and one in the spring. Proposals are not accepted outside of the scheduled proposal windows. The Spring 2023 proposal window opens February 20, 2023 for contacts to be scheduled from January 1, 2024 – June 30, 2024. This proposal is due to ARISS by March 31, 2023 at 11:59 p.m. Pacific Time.

A Proposal Guide is offered to help you plan and identify the resources you will need to host an ARISS scheduled contact. After reading the Guide and developing your plan, you can complete the ARISS Proposal Form and submit it during the proposal window. Download the current version of the Proposal Guide (Spring 2023) at https://ariss-usa.org/wp-content/uploads/2021/09/2021-09-18-ARISS-Proposal-Guide.pdf

U.S. schools and educational organizations may download the ARISS Proposal Form to submit a proposal to host an ARISS contact at https://ariss-usa.org/wp-content/uploads/2023/01/ARISS-Proposal-2023-01-04.docx

A Proposal Webinar is being offered to answer questions about the program and proposal on Wednesday, March 1, 2023 at 8:00 pm ET. Visit https://ariss-proposal-webinar-spring-2023.eventbrite.com to register. A recording of the Proposal Webinar can be located on our ARISS YouTube channel at any time: https://youtu.be/xOYrpeqLzfY

Those with questions regarding the proposal process, please send an email to: ariss.us.education(a)gmail.com

[ANS thanks ARISS for the above information]

ARISS NEWS

Amateurs and others around the world may listen in on contacts between amateurs operating in schools and allowing students to interact with astronauts and cosmonauts aboard the International Space Station. The downlink frequency on which to listen is 145.800 MHz worldwide.

COMPLETED:
Istituto Statale di Istruzione Superiore “Il Pontormo”, Empoli, Italy, direct via IQ5EM. The ISS callsign was OR4ISS. The crewmember was Koichi Wakata KI5TMN. Contact was successful: Thursday, 2023-02-23 09:32:56 UTC with 60 degrees maximum elevation. Congratulations to the Istituto Statale di Istruzione Superiore “Il Pontormo” students and Koichi!

UPCOMING:
Polytechnics Mauritius Ltd, Moka, Mauritius, direct via 3B8ISS. The ISS callsign is presently scheduled to be OR4ISS. The scheduled crewmember is Warren Hoburg, KB3HTZ. Contact has been postponed per school request. It is unknown at this time when it will be rescheduled.

The latest information on the operation mode can be found at https://www.ariss.org/current-status-of-iss-stations.html

The latest list of frequencies in use can be found at https://www.ariss.org/contact-the-iss.html

[ANS thanks Charlie Sufana, AJ9N, one of the ARISS operation team mentors for the above information]

Upcoming Satellite Operations

Congratulations to Ian Parsons, K5ZM, who has recently been appointed manager of the "Upcoming Satellite Operations" page of the AMSAT website https://www.amsat.org/satellite-info/upcoming-satellite-operations/ Thanks, Ian, for volunteering your time to help Keep Amateur Radio in Space!

We also thank Paul Overn, KE0PBR, who has recently given up this task after several years of doing a great job tracking grid rovers rovers, both on the AMSAT page and on Twitter.

+ No roves are currently scheduled.

Please submit any additions or corrections to k5zm (at) comcast (dot) net

[ANS thanks Ian Parsons, K5ZM, AMSAT rover page manager, for the above information]

Hamfests, Conventions, Maker Faires, and Other Events

AMSAT Ambassadors provide presentations, demonstrate communicating through amateur satellites, and host information tables at club meetings, hamfests, conventions, maker faires, and other events.

+ 2023 CubeSat Developer’s Workshop
April 24-27, 2023
California Polytechnic State University
1 Grand Avenue, San Luis Obispo, California 93407
https://www.cubesatdw.org/

+ AMSAT Ambassador Clint Bradford, K6LCS, has a Zoom presentation scheduled with Thames Valley ARC, England on May 11, 2023.

Think a 90-minute lively, informative, and fun “How to Work the Easy Satellites” Zoom presentation would be appropriate for your convention or club? Always included are overviews of the ARRL, AMSAT, and ARISS. And pre-presentation questions are welcome. Contact Clint Bradford, K6LCS, at https://www.work-sat.com/

[ANS thanks the AMSAT Events page for the above information]

Satellite Shorts From All Over

+ Ready for Round Two of QRPp #EME fun? Bernd Wilde, DL7APV, will look for small 70cm stations starting 23 Feb. Weeks ago. Max Romensky, M0SKN, US6IKN, SA5IKN, and EI6KCI, demonstrated that even 3 element Yagi and 40W can work the EME big guns of various calibre, not just Bernd. More information at https://hb9q.ch/2018/?page_id=37 (ANS thanks Max Romensky, M0SKN,for the above information)

+ Last week, the EU Parliament funded the development of a new communications constellation, the Infrastructure for Resilience, Interconnection & Security by Satellites (IRIS2 or sometimes IRISS), which will operate alongside its existing Galileo (GNSS), EGNOS (GNSS overlay), and Copernicus (EO) constellations. The new constellation will consist of

up to 170 satellites deployed to LEO, MEO, and GEO and will integrate with existing communications assets. This will be in addition to commercial ventures by Starlink (12,000+ sats), OneWeb (648 sats), and Rivada (300 sats), as well as the Chinese state-owned mega-constellation plan for just under 13,000 satellites in LEO. (ANS thanks The Orbital Index and SpaceNews for the above information)

+ Recent updates have been made to the Greencube Terminal program by OZ9AAR. The program interfaces with the UZ7HO Soundmodem, and optionally with N3FJP's ACLog software. Information and free download available at: https://www.moonbounce.dk/hamradio/greencube-terminal-program.html (ANS thanks Carsten Groen, OZ9AAR, for the above information)

+ New features have also been added to the satellite rover tracking site at https://hams.at/ (ANS thanks Rockwell Schrock, WW1X, for the above information)

+ Hackaday has published an entertaining YouTube video, "Searching for Space Pirates on Old Military Satellites." The video explains how U.S. Fleet SATCOM UHF transponders, still in space from the 1970s, are being used illegally, often for criminal purposes. It also describes using a simple RTL receiver to listen in on these pirate transmissions. The video is available at https://hackaday.com/2023/02/24/hunting-for-space-pirates/ (ANS thanks Hackaday for the above information)

+ NASA is seeking ham volunteers to gather data during upcoming solar eclipses on October 14, 2023, and April 8, 2024. For details, see https://go.nasa.gov/3IQrFiz (ANS thanks NASA for the above information)

Join AMSAT today at https://launch.amsat.org/

In addition to regular membership, AMSAT offers membership to:

* Societies (a recognized group, clubs or organization).
* Primary and secondary school students are eligible for membership at one-half the standard yearly rate.
* Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status.
* Memberships are available for annual and lifetime terms.

Contact info [at] amsat.org for additional membership information.

73 and remember to help Keep Amateur Radio in Space!

This week's ANS Editor, Mark Johns, KØJM
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